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ABSTRACT

This exploratory study investigated claims regarding the impact of more selective admission standards on the characteristics of students entering teacher education at Michigan State University (MSU). The quota system at MSU, set in 1986, restricts the number of candidates admitted to the program in a given academic term. Comparisons were made between students who, entering in 1985, would and would not have been admitted to the program when judged by fall, 1987, standards. A second sample of students who were admitted after the quota system was established were compared with these two groups. The investigation sought information on the academic abilities and credentials of the subjects and their attitudes toward teaching as a career and their educational beliefs. Data were gathered from student surveys and academic records. The results suggested that it is reasonable to assume that higher program admission standards will improve teacher candidates' academic competence to some extent, but will not diminish overall levels of enthusiasm for teaching nor have a perceptible impact on educational orientations or beliefs. (JD)

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Program Evaluation Series No. 24

DO HIGHER PROGRAM ADMISSION STANDARDS ALTER PROFILES OF ENTERING TEACHER CANDIDATES?

Freeman, Martin, Brousseau & West

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Abstract

Entry level characteristics of teacher candidates who satisfied higher program admission standards were compared with those of candidates who did not. Those who met the standards scored higher on most, but not all, measures of achievement. The two groups expressed similar educational beliefs and levels of commitment to teaching.

Do Higher Program Admission Standards Alter Profiles of Entering Teacher Candidates?

In the folklore of teacher education, popular assumptions and claims often survive with little or no empirical verification. Most assume that higher standards of admission will upgrade the academic credentials of those entering teacher education programs. But, others claim that candidates who are admitted under more selective standards will also have lower levels of commitment to careers in teaching and will overemphasize the importance of academic goals of schooling. If these assumptions and claims are true, the admission of more academically talented students should address the call for more competent teachers sounded in the Holmes and Carnegie reports (Holmes Group, 1986; Carnegie Forum on Education, 1986) and welcomed by the public (e.g., Freeman, Cusick, and Houang, 1985). However, these gains in academic competence will ultimately be partially offset by higher attrition rates among those earning teaching credentials and by the prevalence of teachers who have relatively narrow, subject-centered orientations to teaching.

These concerns highlight the need to critically examine the claims and counterclaims that are likely to surface during deliberations focusing on admission standards in teacher education. The basic purpose of this exploratory study was to investigate these and other claims regarding the impact of more selective admission standards on the characteristics of students entering teacher education programs at Michigan State University (MSU).

In 1985, the number of MSU students applying for admission to teacher education increased sharply and unexpectedly. This dramatic surge in enrollments threatened to undermine the quality and integrity of MSU's thematic

teacher preparation programs[1]. A quota system was, therefore, implemented as an "emergency" response to that threat. The central question guiding the design of this study was, "To what extent, and in what ways has the introduction of the quota system altered the profiles of entering teacher candidates in three general areas (a) academic credentials, (b) career orientations, and (c) educational beliefs?

The publicity surrounding Vance and Schlechty's (1982) report of their national longitudinal study of high school seniors who ultimately became teachers raised widespread concerns about the academic competence of students entering the teaching profession. According to these authors, "The general pattern of the data...indicates that those most likely to enter and be committed to teaching are drawn from those most likely to score lower on the SAT" (p. 23). Whereas efforts to raise program admission standards might be expected to address these concerns, McComb (1985) found that increasing entry grade point requirements from 2.25 to 2.75 (on a 4.0 scale) did not significantly increase ACT scores of students seeking admission to teacher education programs at a large Midwestern university. We, therefore, wondered if students who satisfied MSU's higher admission standards would score higher than those who did not on college entrance exams and other indices of academic achievement such as (a) the number of college prep courses completed in high school, (b) election to the National Honor Society, or (c) the number of college-level remedial courses they were required to take.

Vance and Schlechty's study also supported a popular claim that students with relatively weak academic credentials are likely to have stronger commitments to careers in teaching than those with relatively strong credentials. In their words, "A comparison of the committed teachers and the

confirmed defectors shows that those with high ability who enter teaching are more likely to leave than those with low ability" (Vance & Schlechty, 1982, p. 24). We, therefore, wanted to know if candidates who satisfy higher admission standards approach careers in teaching in ways that differ from those who do not. Are these students less committed to careers in teaching? Do they have less experience working with school aged youngsters? Do they have different reasons for deciding to become teachers?

Finally, as Bussis, Chittenden, and Amarel (1976) argue, "teachers' characteristic beliefs about children and learning have pervasive effects on their behavior, influencing the learning environment they create for children and for themselves" (p. 16). In Porter's (1988) words, "The expectations that teachers hold for student learning are as important a determinant of instructional effectiveness as is the teacher's knowledge of content or knowledge of good pedagogical practices" (p. 6). We, therefore, wanted to know if the educational beliefs of entering teacher candidates who satisfy higher admission standards differ from the beliefs of candidates who do not. Do candidates who satisfy higher admission standards have different beliefs about (a) students, (b) the curriculum, (c) the social context of education, or (d) pedagogy? Do these students have different priorities with regard to the general goals of schooling?

Procedure

The MSU Quota System

The quota system at Michigan State restricts the number of candidates admitted to each elementary and secondary teacher certification program in a

given academic term. The formula used to rank students in each certification area (e.g., elementary education, secondary English) centers on cumulative grade point averages at the time of application, with adjustments for post-BA students, transfer students, and minorities. Although the impact of the fixed quota system varies somewhat from one area of certification to the next (e.g., secondary English vs. secondary math) and from one term to the next, this system has the effect of substantially raising admission standards across virtually all certification programs. Prior to the introduction of the quota system, for example, the minimum cumulative grade point average for admission to Michigan State's teacher education programs was 2.0 across all areas of certification. In fall 1987, one year after the quota system was introduced, the minimum grade point averages for non-minority, on-campus students (as determined by the system) ranged from 2.66 to 3.34 (on a 4.0 scale) across the different areas of certification. The mean grade point average for students completing the entry survey in fall 1985 was 2.78. By the fall of 1987 this figure increased to 3.23.

Design of the Study

Two distinct samples of MSU students served as the focus of this study. The first sample included 223 students who completed the "MSU Entering Teaching Candidates Survey" during fall term of 1985 (the year before the quota system was introduced). Using the cut-off points established for each certification program during the fall, 1987 admission process, members of this sample were sorted into two subgroups - those who would and those who would not have been admitted to a teacher preparation program when judged by the fall, 1987 standards. We will refer to these two subgroups as the "1985 admits" and "1985 denials." The second sample consisted of 129 students who completed the same

entry survey during fall term of 1987 (one year after the quota system was introduced). We will refer to this group of students as the "1987 admits."

Concurrent with the introduction of the quota system, enrollments in teacher education courses were restricted to students who attained junior class standing and were formally aumitted to the College of Education. This additional measure, which was also designed to curb course enrollments, increased the proportion of juniors in the 1987 sample to levels that were well beyond those of the 1985 sample. It is conceivable that those who begin teacher education programs as juniors differ on a number of dimensions from those who enroll as sophomores (e.g., levels of commitment to teaching). We, therefore, attempted to make the 1985 sample parallel to the 1987 sample by eliminating 55 students from the 1985 sample who were not within one term of junior class standing at the beginning of fall term, 1985. In addition, 11 students were excluded because records of the data considered in the admissions process were incomplete. With these exclusions, the "1985 admits" group consisted of 47 students; the "1985 denials" group included 110 students.

As the first step in the analysis of data, we compared responses of students in the "1985 admits" and "1985 denials" subgroups across each of the criterion variables cited in the research questions (e.g., reasons for wanting to become a teacher). We then attempted to confirm those differences that were identified by comparing students in the "1985 denials" group with their counterparts in the "1987 admits" group.

The Survey Instrument

Most of the criterion variables considered in this study were defined by student responses to questions on the entering teacher candidate survey; other data were derived from university records. The "MSU Entering Teacher Candidate

Survey" was designed by a group of teacher education faculty at Michigan State University and has been used in several other research studies (e.g., Book and Freeman, 1986). Students complete the entry survey during the first week of an introductory educational psychology course which is the first required course for both elementary and secondary candidates. Over the past several years, the content validity of the entry survey has been continually upgraded through revisions prompted by internal and external reviews. The design of the study also assures that inferences derived from data provided by the instrument are reliable[2].

Each of the criterion variables in this study is represented by a distinct section of the entry survey. The section of the survey focusing on educational beliefs, for example, consists of 53 statements that provide a representative sample of educational beliefs within each of five general categories - beliefs about students, the curriculum, the social context of education, pedagogy, and teachers. Responses to questions across all sections of the survey provide a comprehensive profile of students entering MSU's teacher certification programs.

Sample Characteristics - Demographic Differences Among Groups

Table 1 describes salient characteristics of the three groups of students who participated in the study. These data should be considered when interpreting the results of this study, and will also help readers make judgements regarding the extent to which these results will generalize to other institutional contexts[3]. Two sets of numbers are especially important - sample sizes and grade point averages. The sample sizes for the two 1985 subgroups attest to the selectivity of the new standards. As these figures show, only 47 of the 157 candidates in the 1985 sample (29.9%) would have

satisfied the 1987 program admission standards. The grade point average of this group of 47 students was 3.25 which was very nearly equal to the mean g.p.a. of the 1987 admits group and 0.67 points higher than the mean for the 110 students in the denials group.

Across all three groups, the participants were predominantly female (85%) and white (96%). Class standings varied somewhat from one group to another. Despite the adjustment cited earlier, the proportion of juniors in the 1987 admits groups (80%) was significantly higher than the corresponding figure for the 1985 denials group (65%). The percentage of students seeking elementary or secondary teaching credentials also varied across groups. The proportion of elementary candidates was higher in the 1987 admits group than in the 1985 denials group (54% vs. 39%); the reverse was true for secondary candidates (26% in 1987 vs. 41% in the 1985 denials group). These differences suggest that the new admission standards were more restrictive for secondary candidates than for elementary candidates.

Insert Table 1 about here

Decision Rule for Reporting Differences

Chi-square tests of independence and t-tests were used to compare candidates in the 1985 denials group with their counterparts in the 1985 and 1987 admits groups. The large number of ex post facto statistical tests (approximately 120 contrasts) prompted the need for a decision rule that would determine which between-group differences would be cited in this report. Because the design of the study provided an opportunity to use the 1987 data to

support the inference that observed differences between the two 1985 groups were real and not an artifact of the sample, we decided the rule should focus on consistencies across the two sets of comparisons. We, therefore, report differences between the two 1985 groups that were statistically significant with the probability of a Type I error fixed at .10 AND supported by comparisons of the 1985 and 1987 groups with alpha fixed at .05[4].

Results

(1) Do Teacher Candidates Who Satisfy Higher Program Admission Standards Have Better Academic Credentials Than Those Who Do Not?

College entrance examination test scores were available for 214 of the 286 students (75%) who participated in this study. When applying for admission to Michigan State University, 15 of these students took the Scholastic Aptitude Tests (SAT), 149 took the American College Testing Program Exam, and 51 completed both exams.

As shown in Table 2, mean scores for the two groups of candidates who satisfied the 1987 program admission standards were higher than mean scores for candidates in the 1985 denials group on both of the SAT subtests. Moreover, despite the limited sample sizes, differences on the verbal subtest satisfied the decision rule for consistency described earlier (alpha = .10 for the first contrast and .05 for the second). However, as an examination of the p-values presented in Table 2 will confirm, differences on the SAT math subtest failed to satisfy the criteria suggested by this rule.

Insert Table 2 about here

As shown in Table 2, mean scores for the 1985 and 1987 admits groups were higher than mean scores of candidates in the 1985 denials group across all four ACT subtests. Differences on the ACT math, social studies, and natural science subtests satisfied our criteria for consistency; differences on the English subtest did not.

Contrasts Across Other Measures of Academic Potential

Analyses of differences between the 1985 denials group and the 1985 and 1987 admits groups also considered three other measures of academic achievement (i.e., election to the National Honor Society, extent of college prep course work, and the number of remedial courses candidates were asked to take in college). Among those who attended high schools with chapters of the National Honor Society, the percentage of students elected to that Society were 41.2%, 53.5%, and 65.0% for the 1985 denials, 1985 admits, and 1987 admits groups respectively. Although the difference between 1985 denials and 1987 admits groups was statistically significant [χ^2 (1, n = 225) = 11.85, p = .001], the difference between the 1985 denials and 1985 admits groups was not [χ^2 (1, n = 145) = 1.39, p = .239].

A measure of college prep course work was derived by summing the number of years of high school course work candidates reported they completed in English, mathematics, science, history/social studies, and foreign languages. Since the upper limit was four years in each subject area, the highest possible score was 20 years. According to the results of two-tailed t-tests focusing on this measure, the mean level of college prep course work did not vary to any significant extent across the three groups. The means for the 1985 denials, 1985 admits, and 1987 admits groups were 14.4 (n = 107), 13.9 (n = 47), and 14.8 (n = 126) respectively. The t-values were 1.34 (p = .184) for the 1985

denials vs. 1985 admits contrast and 1.14 (p = .256) for the second contrast.

A series of three questions asked candidates to indicate if remedial courses in mathematics, reading, or writing had been recommended or required for their college programs. Forty-six percent (46%) of the students in the denials group said they were asked to take at least one remedial course. The corresponding figures for the two admits groups were 30% for the 1985 sample and 34% in 1987. The total number of areas in which candidates were required to take remedial courses ranged from zero to three. The means for this measure were 0.80 (n = 109), 0.58 (n = 43) and 0.58 (n = 126) for the 1985 denials, 1985 admits, and 1987 admits groups respectively. The results of t-tests indicate that candidates in the denials group did not take a significantly larger number of college-level remedial courses than candidates in the two admits groups. The t-value for the 1985 denials vs. 1985 admits contrast was 1.15 (p = .252); the t-value for the 1985 denials vs. 1987 admits contrast was 1.67 (p = .097).

(2) Do Candidates Who Satisfy Higher Program Admission Standards Approach Careers in Teaching in Ways That Differ From Those Who Do Not?

Three questions on the entry survey focused directly on the question of candidates' current levels of commitment to careers in teaching. The first asked respondents to describe "where teaching fits into (their) current career plans." The second read, "If you are successful in finding a job, what is your 'best guess' of the length of time you will work as a teacher?" The third asked those who plan to teach for less than 10 years, "Why do you think you will leave teaching?" As shown in Table 3, the patterns of responding to these questions were similar across all three groups. Like their counterparts in the

1985 denials group, (a) 85% of the candidates in the two admits groups said that teaching was their first choice or the only career they were considering, (b) 58% said they plan to teach for more than 10 years, and (c) 51% of those who plan to leave teaching said they will do so to take (or to prepare for) a more advanced position within the field of education; only 17% said they want to pursue careers outside of education.

Insert Table 3 about here

Similarities in Prior Teaching Experiences

A set of six questions on the entry survey asked students to identify teaching experiences they had with younger children (grades K-8) while in high school. The teaching activities that were cited were (a) camp counselor, (b) coach of youth sports, (c) Sunday school teacher, (d) swimming instructor, (e) other teaching activities involving only one child (e.g., tutoring, piano lessons), and (f) other teaching activities involving groups of children.

If one assumes that high school students who are seriously considering careers in teaching are more likely to pursue these teaching experiences than those who are not, this set of items should provide a measure of one's level of interest in teaching during high school. With this assumption in mind, we compared the total number of activities individuals in each group cited (highest possible total = 6). Because similarities in the mean number of activities across the three groups were striking [1.6 (n = 109), 1.5 (n = 46), and 1.5 (n = 129) for the 1985 denials, 1985 admits, and 1987 admits groups respectively], we did not conduct any t-tests.

Similarities and Differences in Reasons for Wanting to Become Teachers

In another set of items on the entry survey, participants were asked to identify statements describing factors that played a significant role in their decision to become a teacher (e.g., "I love to work with children"; "I believe the quality of education must be improved"). In an effort to determine if there were characteristic differences in candidates' motivations for teaching, we compared the ways students in the denials and admits groups responded to each statement. In general, the patterns of responding were similar across the three groups. However, responses to one of the 14 statements did vary significantly. As shown in Table 3, a higher proportion of students in the denials group reported they had decided to pursue careers in teaching because they were not successful in courses related to their first choice of careers.

(3) Do Educational Orientations and Beliefs Vary Among Candidates Who Do and Do Not Satisfy Higher Program Admission Standards?

The 1985 admits and 1985 denials groups responded in remarkably similar ways to the 53 items in our inventory of educational beliefs. In fact, even with alpha fixed at the liberal level of .10, differences among students in the 1985 sample who did or did not satisfy the 1987 admission standards were statistically significant for only four of the 53 items focusing on educational beliefs. These figures virtually match the frequency of significant differences one would expect by chance alone. The first two items in Table 4 describe between-group similarities that characterized this set of comparisons. These particular items were selected for illustration because they yielded the most consistent response patterns across all three groups.

Insert Table 4 about here

In contrast to the 1985 comparisons, differences between the 1985 denials and 1987 admits groups were statistically significant for nine of the 53 comparisons (alpha = .05). Given the results of the first set of analyses, we were surprised to learn that two of these contrasts confirmed observed differences between the 1985 denials and 1985 admits groups. These contrasts are presented in Table 4.

Similarities in Orientations Toward Academic Goals of Schooling

Because they have enjoyed higher levels of academic success, we predicted that students who satisfied the 1987 program admissions standards would have stronger orientations toward academic goals of schooling than those who did not. However, as the data in Table 5 clearly indicate, this conjecture was not supported by the findings. Rather, these comparisons illustrate the consistent similarities in responses that were characteristic of nearly all of the survey items dealing with educational orientations and beliefs.

Insert Table 5 about here

Discussion and Conclusions

The results of this study provide a relatively straightforward answer to the basic research question we posed in the introduction. When compared with their counterparts who would not have been admitted to one of Michigan State

University's teacher education programs in 1987, candidates who satisfied the 1987 program admission standards (a) scored higher on most, but not all, measures of academic achievement, (b) demonstrated comparable levels of commitment to teaching, and (c) expressed similar educational beliefs.

The fact that candidates in the two admits groups scored significantly higher on most measures of academic achievement is reassuring, but not totally satisfying. On the one hand, these results support the claim that raising minimum grade point averages for admission to teacher education programs will enhance the academic competence of those seeking teaching credentials, a claim that is central to building better public relations for the teaching profession (see Vance & Schlechty, 1982). In a similar vein, the finding that admits were less likely to choose teaching after experiencing failure in courses related to their initial choice of careers suggests that higher admission standards should alter the image of teaching as a "dumping ground" for those who lack the qualifications for other professions.

Nevertheless, there is reason to question whether raising program admissions standards will resolve all questions about teacher candidates' academic competence. For one thing, it does not appear that candidates in the two admits groups were more vigorous in their pursuit of academic course work while in high school. Even more disarming, nearly one-third (33.1%) of the students in the two admits groups were required to take at least one college level remedial course in mathematics, reading, or writing. This finding complements that of Trennepohl (1983) who found that increases in minimum grade point averages did not result in improvements in teacher candidates' basic skills in reading or math. Simply stated, whereas raising minimum grade point averages is a politically expedient way to enhance the academic image of

teacher candidates, this action alone is not likely to silence critics calling for assurance that all who earn teaching credentials are competent in reading, math, and writing. The results, therefore, support the call for standardized achievement tests or some other admissions or certification criteria that will address the issue of basic skills competence head on.

In our view, the most noteworthy findings of the study center on the issue of commitment to teaching. The research literature indicates that the more academically competent graduates of teacher education programs are less likely to enter the teaching profession (Pigge, 1985) or to pursue careers in teaching for as long as their less competent counterparts (Vance & Schlechty, 1982). Yet, our findings revealed no clear distinctions in levels of commitment to teaching among entry-level candidates who did or did not satisfy higher program admission standards. Moreover, members of the admits groups were as likely to have worked with school aged youngsters in various teaching roles while in high school as members of the denials group. This lack of a clear distinction in commitment to teaching at program entry implies that the process of differential attrition of more academically competent teachers probably begins during the preservice phase of teacher development. Educators should, therefore, strive to identify conditions within teacher education programs that may contribute to this process.

As noted in the introduction, some claim that the more academically competent teachers are likely to have a subject-centered orientation to teaching, while their less competent counterparts are likely to be student-centered. In an earlier study, in which the same survey instrument was used, we found evidence to suggest that this difference in orientation does occur among candidates seeking elementary and secondary teaching credentials

(Book & Freeman, 1986). But in the current study, there was no evidence to suggest that this distinction exists among those who do and those who do not satisfy higher program admission standards. Rather, the admits and denials groups were strikingly similar in educational beliefs, held comparable views regarding the importance of academic goals of schooling, and reported they were pursuing careers in teaching for much the same reasons. Tabachnick and Zeichner (1984) seem to offer the most plausible explanation for these findings. They argue that teacher candidates views of teaching have been shaped in very similar ways by the thousands of hours they have all spent in schools as K-12 students.

Implications

Above all, the results of this study support Applegate's (1987) call for comprehensive programs of research on teacher candidate selection. In addition to the obvious need to establish empirical links between admission criteria and desired teaching performance, the findings suggest that questions such as the following should be addressed:

- To what extent will higher program admission standards alter the entry-level profiles of candidates in other institutional contexts such as graduate level teacher preparation programs or undergraduate programs in which several different admissions criteria are considered?
- What factors or conditions within teacher preparation programs promote the differential attrition of the more academically competent teacher candidates?
- Will differences between those who do and those who do not satisfy higher program admissions standards be greater at program completion than at program entry?

In the absence of further research, the results of this study suggest it is reasonable to assume that higher program admission standards will improve teacher candidates' academic competence to some extent, yet will not diminish overall levels of enthusiasm for teaching nor have a perceptible impact on educational orientations or beliefs.

Reference Notes

1. For a description of the four thematic teacher education programs at Michigan State University, see Barnes (1987).

2. Questions are often raised about the reliability and/or validity of inferences based on responses to individual items on a survey instrument. It is, therefore, important to recognize that the conclusions cited in this report are based on consistent response patterns across clusters of items rather than responses to individual survey questions. Likewise, because of the design of the study and the fact that the findings represent inferences about groups rather than individuals, the reliability of conclusions cited in this report is analogous to the general findings of a public opinion survey that are consistent across two different points in time. Nevertheless, readers should consider the issue of reliability when interpreting responses to individual items. Readers should also judge the extent to which individual items supporting each conclusion do, in fact, provide valid indices of the construct being considered.

3. When reflecting on the issue of generalizability, it is important to consider that this study focused on the impact of increased admission standards on profiles of students entering undergraduate teacher preparation programs. In addition, the increase in standards was based primarily on increases in minimum grade point averages and not changes in other criteria such as standardized test scores or interviews. Although an applicant's grade point

average is the most widely used admissions criterion (Laman & Reeves, 1983), admissions procedures in most teacher preparation institutions consider a variety of criteria (Applegate, 1987; Benner, George, & Cagle, 1987). Despite these limitations, the Cornfield and Tukey (1956) bridge hypothesis suggests that the findings of this study should generalize to preservice teacher preparation institutions with student populations that are comparable to those at Michigan State University. For a detailed description of characteristics of students entering MSU's teacher preparation programs, see West and Brousseau (1987).

4. This decision rule reflected our concern that the sample sizes for the 1985 denials vs. 1985 admits contrast might be too small to provide a reasonable level of power if alpha were set at a relatively low level. Given this concern and the fact that the design of the study included a second contrast, we decided to set the probability of a Type I error at .10 for the initial comparison and to use a more conventional standard (alpha = .05) for the 1985 denials vs. 1987 admits contrast which was based on larger samples.

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Table 1

Sample Characteristics

	1985 Denials (n = 110)	1985 Admits (n = 47)	1987 Admits (n = 129)
(1) Grade Point Average:	2.58	3.25	3.23
(2) Gender:			
(a) females	83.6%	76.6%	87.6%
(b) males	16.4	23.4	12.4
(3) Ethnic Groups:			
(a) Caucasian	100.0%	89.4%	94.5%
(b) all others	0.0	10.6	5.5
(4) Class Standing:			
(a) sophomores	15.5%	6.5%	1.6%
(b) juniors	64.5	71.7	79.8
(c) seniors	12.7	17.4	14.7
(d) postbaccalaureate	7.3	4.3	3.9
(5) Certification/Endorsement:			
(a) special education	9.3%	2.1%	14.0%
(b) child development & teaching	10.2	10.6	6.2
(c) elementary education	38.9	53.2	53.5
(d) secondary education	40.7	34.0	26.4

Table 2

Contrasts in College Entrance Examination Test Scores

	1985 Denials	1985 Admits	1987 Admits	85 vs. 85 t-test	(p)	85 vs. 87 t-test	(p)
SAT Scores	(n = 25)	(n = 10)	(n = 30)				
Verbal							
Mean	394	507	463	3.41	(.002)	2.51	(.015)
SD	81	106	116				
Math							
Mean	442	537	478	2.51	(.017)	1.22	(.228)
SD	105	91	111				
ACT Scores	(n = 80)	(n = 30)	(n = 90)				
English							
Mean	19.4	20.8	21.7	1.53	(.129)	3.82	(.000)
SD	3.9	4.6	3.8				
Math							
Mean	19.1	23.2	21.6	3.00	(.003)	2.66	(.009)
SD	6.8	5.4	5.8				
Soc. Stud.							
Mean	18.3	20.8	21.2	1.85	(.067)	3.07	(.002)
SD	6.1	6.4	6.0				
Nat. Sci.							
Mean	21.8	24.1	24.2	2.42	(.017)	3.14	(.002)
SD	4.4	4.5	5.2				
Composite							
Mean	19.8	22.3	22.3	2.75	(.007)	3.79	(.000)
SD	4.2	4.3	4.3				

Table 3

Contrasts in Approaches to Careers in Teaching

	1985 Denials	1985 Admits	1987 Admits
(1) Where does teaching fit into your current career plans?	(n = 108)	(n = 45)	(n = 126)
(a) only career I am considering	41.7%	31.1%	42.1%
(b) my first choice of careers	45.4	48.9	46.8
(c) not my first choice of careers	10.2	15.6	7.9
(d) no intention to teach	2.8	4.4	3.2
χ^2, 3df = 2.05, p = .562 for 1985 denials vs. 1985 admits, and 0.39, p = .943 for 1985 denials vs. 1987 admits.			
(2) "Best guess" of the length of time you will work as a teacher?	(n = 93)	(n = 36)	(n = 113)
(a) less than five years	4.3%	8.3%	8.0%
(b) 5 to 10 years	35.5	36.1	33.6
(c) more than 10 years	60.2	55.6	58.4
χ^2, 2df = 0.88, p = .645 for 1985 denials vs. 1985 admits, and 1.16, p = .559 for 1985 denials vs. 1987 admits.			
(3) Why do you think you will leave teaching?	(n = 47)	(n = 17)	(n = 55)
(a) To assume a more advanced position within education	42.6%	70.6%	45.5%
(b) To raise a family	36.2	11.8	23.6
(c) To pursue a career outside the field of education	12.8	17.6	16.4
(d) For "other" reasons	8.5	0.0	14.5
χ^2, 3df = 6.13, p = .106 for 1985 denials vs. 1985 admits, and 2.41, p = .492 for 1985 denials vs. 1987 admits.			
(4) Percent who said a significant reason for wanting to become a teacher was their lack of success in courses that would have prepared them for their first choice of careers.	(n = 91) 23.1%	(n = 36) 8.3%	(n = 110) 4.5%
χ^2, 1df = 2.76, p = .097 for 1985 denials vs. 1985 admits, and 13.58, p = .000 for 1985 denials vs. 1987 admits.			

Table 4

Similarities and Differences in Educational Beliefs

	Agree	Neutral	Disagree
Similarities:			
(a) Students learn more when they work alone than when they work in groups.			
- 85 denials (n = 109)	7.3%	32.1%	60.6%
- 85 admits (n = 46)	6.5	26.1	67.4
- 87 admits (n = 129)	4.7	31.8	63.6
χ^2, 3df[a] = 0.75, p = .862 for 1985 denials vs. 1985 admits, and 1.57, p = .665 for 1985 denials vs. 1987 admits.			
(b) When making educational decisions, teachers should rely on what "feels right" instead of "what available information suggests is right" whenever these two sources conflict.			
- 85 denials (n = 107)	42.9%	39.3%	17.7%
- 85 admits (n = 46)	43.4	41.3	15.2
- 87 admits (n = 127)	47.2	37.0	15.8
χ^2, 4df = 0.84, p = .933 for 1985 denials vs. 1985 admits, and 1.52, p = .823 for 1985 denials vs. 1987 admits.			
Differences:	Agree	Neutral	Disagree
(a) Schools should function as agents to change society rather than as reinforcers of the status quo.			
- 85 denials (n = 107)	28.0%	57.0%	15.0%
- 85 admits (n = 46)	45.7	45.7	8.7
- 87 admits (n = 129)	49.6	42.6	7.8
χ^2, 4df = 8.06, p = .090 for 1985 denials vs. 1985 admits, and 13.89, p = .000 for 1985 denials vs. 1987 admits.			
(b) When working with slow learners, teachers should focus nearly all of their instruction on "minimum competency" objectives.			
- 85 denials (n = 108)	13.9%	25.9%	60.2%
- 85 admits (n = 46)	13.0	13.0	73.9
- 87 admits (n = 127)	3.9	29.1	66.9
χ^2, 4df = 8.78, p = .067 for 1985 denials vs. 1985 admits, and 3df = 14.08, p = .003 for 1985 denials vs. 1987 admits.			

[a] The notation "3df" indicates that "strongly agree" or "strongly disagree" responses were not selected by respondents for the items in question.

Table 5

Similarities in Orientations Toward Academic Goals of Schooling[a]

	1985 Denials (n=110)	1985 Admits (n=47)	1987 Admits (n=126)
- Percentage who rated "promoting academic development" as the most important of four general goals of schooling.	36.4%	40.0%	46.4%
- Percentage who, when given three choices, said their greatest sense of satisfaction as a teacher would result from, "being recognized for my ability to promote high levels of academic achievement."	29.1	34.0	25.6
- Proportion who, when given four choices, said, "communicating knowledge at a level students understand" will be most essential to my success as a teacher.	37.4	37.0	33.9
- Proportion who, when given three choices, said they hope their students will remember them 20 years from now as a teacher who "challenged students to perform at their highest possible levels of academic achievement."	41.3	36.2	37.2
- Percentage who agreed or strongly agreed with the statement, "The most important measure of a good teacher is that teacher's ability to enhance the academic achievement of students."	60.2	56.5	61.1

[a] The results of Chi-square tests of independence indicate that none of the denials-admits comparisons is significant when the probability of a Type I error is set at .05.